facilities regardless of whether those facilities had been found to have no significant environmental impact under the FCC's RF standards.

Similarly, in West Hollywood, California, the City Council in July 1993 passed resolutions denying the addition of cellular telephone towers at two locations.[14] Both facilities had been approved by the Planning Commission. However, an appeal was taken to the Council based on health concerns. Although the decision was not based on any specific power limits, the Council denied both applications, stating that "[the] evidence put forth by the applicant and others in support of the project was inconclusive because no witness or evidence presented concluded that the proposed use of the property was safe."[15]

In another case, the licensee of KBVU(TV) was forced to relocate an antenna after its site application was denied by the Eureka, California, Planning Commission, based on the amount of RF energy that would be created at an antenna farm.[16] The Planning Commission was reportedly asked whether it would reconsider the application if it were shown that the FCC approved the additional radiation at the site under ANSI standards, but rejected that proposal, stating that the FCC's determination would make no difference.[17]

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[14] City of West Hollywood City Council Resolution Nos. 1160 and 1161 (July 1993) (Exhibits J and K).

[15] Id.

[16] See Report of Chester Smith, General Partner, KBVU(TV) (Exhibit L).

[17] Id.

Because so many transmitter sites are needed for cellular systems, cellular radio operators frequently experience delay and obstruction at local levels. In its comments in this proceeding, McCaw Cellular Communications, Inc., reported on a series of problems in attempting the rollout of its cellular radio network in New York.[18] For example, McCaw filed in 1990 for a use variance in Dobb's Ferry, which was denied on the basis of the unsupported fears of citizen's groups regarding electromagnetic energy. The Zoning Board based its denial in part on McCaw's failure to prove "the absence of possible future hazards to the health and welfare of the community." See Cellular Telephone Company v. Rosenberg, 624 N.E.2d 990, 992 (N.Y. 1993). McCaw was required to appeal the decision, and was finally successful in having it overturned in late 1993, in part because, as the appellate court noted, "the transmission from the cell site would not affect humans, animals or any other organisms." Id. at 995.

As long as state and local governments have the authority to engage in their own individualized evaluations of FCC-approved RF transmitters, they will have the power to undo what the Commission has authorized. As McCaw summarized its experiences in dealing with local regulation of its transmitters: "The aggregate effect of these measures is to delay service to the public,

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[18] See McCaw's Comments in ET Docket No. 93-62, at 20-21 (filed Jan. 25, 1994). McCaw provides many additional examples of its difficulties in obtaining permits for its cellular transmitter sites.

unnecessarily raise costs, and, in some cases, deny service to the public altogether."[19]

### C. State and Local Regulators Impose New Licensing Requirements on FCC-Authorized Facilities.

Even if use of a transmitter site is not denied completely, local governments often enact requirements for transmitting facilities that result in an overlay of "licensing" requirements inconsistent with the Commission's. For example, Massachusetts requires all sources of RF radiation to comply with intricate registration and notification procedures.[20] At the time comments on the RF NPRM were being filed, New Jersey was in the process of adopting regulations which would require RF sources to register with the state, pay a substantial "registration fee," and open their facilities to annual inspections by state officials.[21] Compliance with such requirements imposes another layer of regulatory hurdles that Commission licensees must cross before they can provide the service they have already been authorized to deliver.

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[19] McCaw's Comments, at 23 (filed Jan. 24, 1994).

[20] See CBS Inc., et al. Comments in ET Docket No. 93-62, at 43 (filed Jan. 25, 1994).

[21] See Comments of New Jersey Broadcasters Association in ET Docket No. 93-62, at 3 (filed Jan. 25, 1994); Comments of Hammett & Edison in ET Docket No. 93-62, at 6 & nn. 9-10 (filed Jan. 25, 1994); Comments of National Association of Broadcasters in ET Docket No. 93-62 (filed Jan. 25, 1994); Comments of Electromagnetic Energy Policy Alliance in ET Docket No. 93-62 (filed Jan. 25, 1994).

A 1993 resolution of the Village of Wilmette, Illinois, cited above, provides that an applicant for a special use permit for the installation of telecommunications receiver/transmitter equipment must show that the power density of the RF signal or transmission radiation caused by the proposed facility will not exceed .025 $\mu W/cm^2$ at ground level 1,000 feet from the proposed site and will not exceed 1 $\mu W/cm^2$ within a 300-foot radius of the proposed site.[22] This resolution also flatly prohibits installation of a proposed facility within 500 feet of properties occupied at the time of the application as schools, preschools or daycare centers.[23] These requirements are more stringent than the 1992 ANSI standard.

A further example of additional RF requirements was reported by Celpage, Inc., in its comments in this proceeding. Celpage has been burdened with compliance requirements and costs over and above those required by the Commission in the course of providing paging services in Puerto Rico. Pursuant to regulations recently enacted by the Puerto Rican Planning Board, all Commission licensees are required also to obtain a certificate from the Commonwealth of Puerto Rico permit-issuing authority prior to operating any radio transmitter. In addition, the applicant must perform complicated engineering studies, not required by the Commission, before using the transmitter. This has resulted in an

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[22] Exhibit D at 2.

[23] Id.

enormous expense and administrative burden for Celpage and other paging and cellular (and, presumably, other radio) operators in Puerto Rico.[24]

Similarly, local regulations may require FCC licensees to modify facilities the Commission has authorized. In its comments, PacTel Cellular (now AirTouch Communications) reported that the Planning Commission of the City of Rancho Palos Verdes agreed to issue a use permit to PacTel to construct a cellular facility, but, because of electromagnetic energy concerns, would only do so on the condition that PacTel limit the power level of the facility and the number of radio channels used,[25] even though the proposed power level and channel number were authorized by its FCC license. PacTel was similarly required to limit the power output of a facility in Sacramento to a level far lower than that allowed under its FCC license after landowners filed a lawsuit because of fears of RF radiation.[26]

State and local regulations that delay, increase the costs of or require modification of federally licensed facilities in order to ensure compliance, unduly affect how new communications service authorized by the Commission is ultimately introduced, if at all.

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[24] Celpage, Inc. Comments in ET Docket No. 93-62, at 4-6 (filed Dec. 9, 1993).

[25] PacTel Cellular Comments, in ET Docket No. 93-62, at 4 (filed Jan. 25, 1994).

[26] Id. at Attachment 3.

## D. State and Local Regulation of RF Transmitters Is Hindering Rollout of New Services and Improvements in Existing Services.

At present, broadcasters, cellular phone and paging companies and other providers of land mobile communications services, such as specialized mobile radio (SMR) and other two-way dispatch communications services, already encounter state and local regulation as obstacles in the siting of RF transmitters. With the prospect of broadcasters' near-term advance to newer digital technologies (including ATV and DAB), which will likely require the use of new transmitter sites or new antenna systems, and the impending rollout of new PCS systems, which will require a geometric increase in the number of wireless cell sites, these obstacles will become greater, particularly in terms of cost and delay.

Broadcast licensees and permittees have already expended millions of dollars in complying with local restrictions on construction and use of FCC-authorized transmitters. But the initial implementation costs of converting to ATV have been estimated by NAB to be between $1.3 and $2.2 million per station, and so the stakes are much higher. The cost-benefit evaluation of implementing ATV may already be marginal for many stations, and the prospect of additional costs and delays imposed by state and local regulation of antenna siting based on inconsistent electromagnetic energy standards may push the calculus even further against improving broadcast service.

In considering the administrative costs of local regulation that impedes the rollout of new services, the Commission should also consider the impact of

competition. Broadcasters provide free, over-the-air television service in competition with cable television, wireless cable, and direct broadcast satellite. Delay in developing a new competitive technology could be enormously harmful in terms of advertising, market penetration, and consumer satisfaction. Broadcasters, the Commission and the general public should not have to tolerate the prospects of locally imposed delays and obstructions to the construction of new main channel and broadcast auxiliary facilities that comply with FCC standards and will provide new and enhanced service.

With respect to wireless telecommunications services, CTIA estimates that 15,000 new cell sites may be required for existing cellular systems to accommodate increased demand over the next 10 years. As the market for cellular telephone service grows, the need for more cell sites will increase, even though the rollout of digital technology will allow cell sites to serve more subscribers.

The deployment of Enhanced SMR ("ESMR") service and PCS will result in an exponential further increase in the number of cell sites. During the Commission's PCS proceeding, commenters estimated that they would have to construct between four and seven cell sites to provide coverage identical to each cellular radio cell site.[27] The need to deploy micro- and pico-cells in order to provide capacity and coverage in urban environments means a further increase in the number of cell sites. And a single ESMR carrier, Nextel, is constructing 2,000

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[27] See US West "Petition for Expedited Partial Reconsideration and for Clarification," at 7-12 (filed Dec. 8, 1993).

cell sites for its wireless network.[28] Delay in obtaining cell sites in such quantities would obviously jeopardize the ability of FCC licensees to provide service at all. Moreover, confronted with varying regulatory requirements over a licensed service area, new PCS licensees will face added costs, such as increased labor and installation costs, resulting from not being able to install a uniform network. In short, compliance with a patchwork of state and local RF regulations can result in increased administrative costs, which will increase the cost of new services to subscribers, without justification.[29]

In its comments to the Commission, McCaw provided a good illustration of the problem. McCaw stated that it would need to add at least 4,000 new cell sites in 1994 to provide coverage to new areas and additional capacity and higher quality coverage to existing areas.[30] Permit proceedings for new cell sites and the modification of existing sites have been bogged down, however, as cellular companies struggle with delays and denials of local zoning permits because of often unfounded fears about electromagnetic energy. Ironically, these delays directly interfere with the electromagnetic energy interest itself: cellular

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[28] See Amy Harmon, "Nextel Launches New Wireless Service in State," Los Angeles Times, Sep. 23, 1994, at D-3.

[29] Increased costs are not limited to complying with additional reporting and measurement requirements. Communications companies have also incurred excess costs in preparing multiple detailed site assessments, educating local decisionmakers about the nature of electromagnetic energy, preparing expert testimony in order to defend the safety of proposed facilities in permitting proceedings and public hearings, pursuing permits simultaneously for a number of alternative sites, and delaying the provision or expansion of service.

[30] McCaw Comments in ET Docket No. 93-62, at 26, (filed Jan. 25, 1994).

companies are attempting to modify their networks to use smaller cells, which would require less power and result in lower RF emissions, but because local concerns over electromagnetic energy are interfering with the obtaining of permits, this conversion (and the resultant decrease in RF emissions) is being delayed.[31] A universally applied federal RF compliance standard would resolve this problem.

A national standard would also foster the expeditious and efficient implementation of additional new technologies. The multitude of conflicting state and local RF regulations are affecting and will affect the rollout of new technologies such as PCS, ATV, digital radio and cellular technology.[32] The Commission has an obligation to foster the development of new communications technologies and the availability of such technologies for public use. 47 U.S.C. § 157(a). A failure to control the growing tide of state and local RF regulation will prevent the Commission from fulfilling this obligation as communications companies are delayed in or are precluded from offering new services because of the costly and burdensome task of complying with multiple RF standards.

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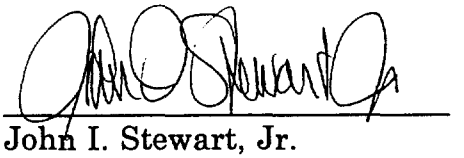
[31] The same effect will be true for the conversion of conventional broadcast transmission systems to digital systems. Digital transmission techniques will allow use of lower power than existing antennas, so that state or local impediments to the siting and construction of new digital broadcast facilities will have the antithetical effect of delaying a reduction in electromagnetic energy emissions.

[32] See AMSC Subsidiary Corp. Comments in ET Docket No. 93-62 (filed Jan. 25, 1994); Association for Maximum Service Television, et al. Comments in ET Docket No. 93-62 (filed Jan. 25, 1994); NAB Comments in ET Docket No. 93-62 (filed Jan. 25, 1994); McCaw Cellular Communications, Inc., Comments in ET Docket No. 93-62 (filed Jan. 25, 1994).

## IV. CONCLUSION

For the reasons outlined above, EEA respectfully requests that the Commission issue a Further Notice of Proposed Rulemaking for adoption of a rule preempting all state and local statutes, guidelines, and policies that are inconsistent with the FCC's RF radiation standards or have the effect of impeding, delaying or precluding construction or operation of an FCC-licensed transmitting facility because of RF concerns, where the Commission has found that the transmission facility complies with the Commission's guidelines for RF radiation.

ELECTROMAGNETIC ENERGY ASSOCIATION

By: 

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Its Attorneys

December 22, 1994

EXHIBIT A


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## 1994-95 OFFICERS

| | |
|---|---|
| **Chair** | Jesse Russell, Sr.<br>*AT&T Bell Laboratories* |
| **Vice President,<br>Science & Technology Committee** | John Osepchuk<br>*Raytheon Company* |
| **Vice President,<br>Public & Governmental Affairs Committee** | Donald Walker<br>*Motorola Inc.* |
| **Treasurer** | Barry Umansky<br>*National Association of Broadcasters* |
| **Secretary** | Ronald Petersen<br>*AT&T Bell Laboratories* |

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| John Chubb | *Apple Computer, Inc.* |
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| Barry Kratz | *Ericsson Radio Systems, Inc.* |
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Nokia Mobile Phones
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Personal Communications Industry Assn.
Raytheon Company
Sensormatic Electronics Corporation
Sunbeam Oster Household Products
United States Cellular

## EEA STAFF

| | |
|---|---|
| Dinah McElfresh | *Executive Director* |
| Amy Nelson | *Administrative Assistant* |

NEW CATE

4. Parking Stalls Shared Jointly

Provision of parking stalls shared jointly by several persons in the same block or in the same vicinity is permissible, in which case, the number of stalls required shall be the sum total of the individual requirements provided. (orig. 12-9-57; am. 8-6-80)

M. RETAIL SALES OF FIREWORKS PROHIBITED

The retail sale of fireworks as defined in Section 12- 28-101, C.R.S. 1973, as amended, for any purpose is prohibited in all zone districts. No exception to this prohibition may be allowed under any provision of this Zoning Resolution, including but not limited to Section 13. (orig. 6-13-83)

N. BORROW PIT OPERATIONS

Borrow pit operations as permitted in Section 11 are allowed in each zone district including Planned Development except in the Flood Plain Overlay District. (orig. 8-25-86).

O. GROUND AND BUILDING LIGHTING

1. Ground and building lighting shall be confined to the property and shall not cast direct light or glare on adjacent properties or rights-of-way. (orig. 6-14-88)

2. Maximum height of on-site pole lights shall be 20 feet. (orig. 6-14-88)

**P. TELECOMMUNICATIONS FACILITY:**

**1 The following applies to all telecommunications towers and facilities that are not allowed as a use by right in a standard zone district. (orig. )**

**a. Unless otherwise allowed by this resolution, all new telecommunications towers, antennas and accessory facilities and any increase in the size of a legal nonconforming telecommunications tower for the following uses must be submitted for rezoning to planned development or for special use approval: radio, television, microwave, meteorological data collection, land-mobile, cellular, and other similar broadcast transmission and receiving activities. (orig. )**

**b. Unless in conflict with the Official Development Plan or special use approval, additional antennas and equipment may be added to a facility that has received zoning or special use approval from the Board of County Commissioners of Jefferson County, existing antennas on an approved facility may be modified, and the power output of existing antennas on an approved facility may be increased without a hearing provided the standards and procedures outlined in ANSI standard C-95.1 or any revisions thereto, County regulations concerning non-ionizing electromagnetic radiation, OST Bulletin No. 65 and Electronics Industries Association (EIA)-RS 222 (E) or the latest revision thereof are complied with. The Planning and Zoning Department shall be notified within 14 days of any change in or addition of antennas whose transmitter power output exceeds 1000 watts of radio frequency power output. The Planning Department may request copies of plans depicting such modification and other evidence necessary to demonstrate that such modifications are in compliance with the provisions of this Section and with the Official Development Plan or special use approval.**

c. Any modifications to approved facilities must be consistent with the specifications in EIA - RS 222 in its current adopted revision. The Planning and Zoning

Department must be notified at least 30 days prior to any modification to increas the wind or weight loading capacity, height, or footprint of a tower, and ma request copies of plans depicting such modification and other evidence necessar to demonstrate that such modifications are in compliance with the provisions c this Section and with the Official Development Plan or special use approval.

3. Non-ionizing Electromagnetic Radiation Standards (NEIR) and Procedures: (orig. )

a. A new source of NIER or increase in NIER from an existing source, when combine with existing sources of NIER, shall not expose the general public to ambien radiation exceeding that defined in OST-65 and ANSI C95.1; provided, however that if a federal or local standard is adopted that is more stringent than th standard set forth herein, such other standard shall apply. (orig. )

b. Before establishing a new source of NIER or changing an existing NIER source tha exceeds 1000 watts of radio frequency output power per transmitter in a way tha increases the amount or changes the radiation pattern of NIER, an applicant shal submit the following information. (orig. )

(1) Frequency, antenna gain, direction of main lobe, if any, power output o transmitter and effective radiated power. In lieu of this, a copy of th applicant's submission before the FCC will suffice. (orig. )

(2) Type of modulation and class of service. (orig. )

(3) Location of the antenna by geographical coordinates, including center o radiation (COR) and height above grade. (orig. )

(4) Horizontal and radial distance from the NIER source to the neares habitable space regularly occupied by persons other than employees c the transmitter, antenna, and/or tower owner, and the points on and o the property with the highest calculated NIER levels from the propose new source in combination with existing sources (this may be shown i graphic form). The party responsible for the new NIER source sha measure the NIER level at up to 12 sites selected by mutual agreement c the applicant, the resident community, and the Planning Department (orig. )

(5) Ambient NIER levels in the frequency range of the proposed source an calculated cumulative NIER levels after establishment of the propose new or changed NIER source measured at the locations set forth in th preceding paragraph. (orig. )

c. Calculations and measurements of NIER will not be required for any new source NIER if the facility will operate at 1000 watts of radio frequency transmitting power less. (orig. )

d. Field measurements documenting that facilities covered by this Section comp with the applicable standard set forth herein shall be submitted within 90 days aft each installation, whether new or modified, becomes operational and functioning at its maximum approved power.

drs2; companion files: cs6, csec15, csec1
if approved - in all pending S2 amendments
:mt 5.6.93

EXHIBIT C

JAN 9 7 1989

ORDINANCE NO. 527 SUPPLEMENTAL

CONCERNING MICROWAVE TRANSMITTERS

WHEREAS, Microwave terminals or facilities are known to emit non-ionizing radiation; and

WHEREAS, non-ionizing radiation may be hazardous to human health; and

WHEREAS, it is generally recognized that non-ionizing radiation may be hazardous to human health from transmitters only and not from receivers; and

WHEREAS, it is recognized that such microwave transmission may be hazardous to human health at levels in excess of the Federal government standard or the American National Standards Institute; and

WHEREAS, it is not absolutely known at what levels they cease to become dangerous; and

WHEREAS, there continues to be debate and disagreement among scientists concerning the degree of such hazard and while research in this field is continuing, the American National Standards Institute (ANSI), after 8 years of consideration, has approved a new safety standard for exposure to radio-frequency and microwave radiation; and

WHEREAS, the degree of said hazard is the subject of much debate and disagreement among scientists; and

WHEREAS, microwave transmitters and facilities that are owned or proposed by public utilities, public service companies that are franchised by the state, or state agencies are under the exclusive jurisdiction of the Department of Public Utility Control Siting Council (formerly known as the Power Facility Evaluation Council) Connecticut General Statutes 16-50g et seq. and Connecticut General Statutes 16-235; and

WHEREAS, the Board of Representatives of the City of Stamford has the power and authority by Charter to consider and pass ordinances regarding the protection of the health and safety of the Stamford citizens; and

WHEREAS, the Department of Health of the City of Stamford has the power to administer and enforce ordinances regarding the health of the citizens of Stamford; and

WHEREAS, the Board of Representatives desires to protect the health of the residents of Stamford from being exposed to levels of radiation in excess of the permissible standards; and

WHEREAS, the above purpose would be best served and monitored by an initial application and annual permit process.

NOW THEREFORE, BE IT ENACTED BY THE CITY OF STAMFORD THAT:

1. Any person, partnership, corporation, firm, joint venture or other entity not under the exclusive jurisdiction of the D.P.U.C. as per C.G.S. 16-235, seeking to own, lease, construct or operate a microwave transmission facility involving greater than 5 watts input into the antenna array within the City of Stamford, shall first apply to the City of Stamford Health Department for an advisory permit before it applies to the Building Inspector for a permit to construct or to the land use Boards: Planning, Zoning, or Zoning Board of Appeals for various land use permits or exceptions.

2. Said application will contain the essential identification and definition facts regarding the proposed microwave transmitter. Said application shall have appended to it as exhibits, copies of the specifications, engineering, and scientific data that the applicant has previously submitted to the FCC, and/or any other applicable federal agencies or State of Connecticut departments.

3. Upon receipt of the application, the Health Director will convene a panel of three experts in the field of the science and technology of microwaves.

(a) Said experts are to be chosen from a list of recognized experts. The applicant will choose one expert. The City will choose one expert and the third expert will be a neutral party chosen by the other two experts.

(b) It will be the duty of the ad hoc scientific panel to consider the scientific material submitted by the applicant, to hold a public hearing, and to make advisory recommendations as to construction, modification, acceptance or rejection of the plans, and other guidelines regarding the proposed microwave transmission terminal or facility.

(c) Said panel shall convene within 60 days after the applicant has submitted its application to the Health Department.

(d) It will be the responsibility of the applicant to pay for the fees and expenses charged by the three experts for their services rendered. This is in consideration for the City of Stamford considering and possibly permitting the application for a microwave terminal or facility and advising as to same.

4. The panel shall hold a public hearing within 60 days after their having convened.

5. (a) The said public hearing shall be announced by newspaper publication and by letter to land owners as listed in the grand list within a 500 foot radius of the property boundaries upon which such proposed microwave transmission terminal or facility is located.

(b) A list of the landowners contacted by letter and their addresses will be made available to any person requesting it. The list will be made available on or before the day the initial mailing is made, but not less than seven (7) calendar days preceeding the public hearing. A fee not to exceed ten cents (10¢) per name may be charged to defray the costs of preparing the list.

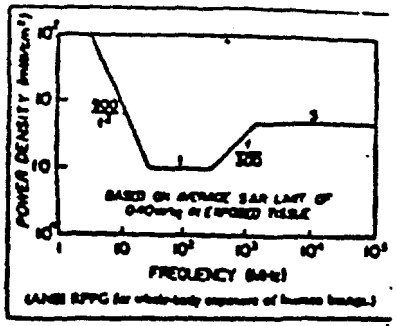
6. The public hearing will be held in the evening at either the Board of Representatives' room or the Health Department for the purpose of hearing the comments and recommendations of the public and any experts who may want to testify at that time. The ad hoc expert panel may also inform and explain the application and technical data to the people who attend the public hearing.

7. The expert scientific and technical panel will be guided by the new standard set by the American National Standards Institute which is stricter than the current federal and state standards which are under review. That standard is:

Table 1
Radio Frequency Protection Guides

| (1) Frequency Range (MHz) | (2) $E^2$ ($V^2/m^4$) | (3) $H^2$ ($A^2/m^4$) | (4) Power Density ($mW/cm^2$) |
|---|---|---|---|
| 0.3-3 | 400,000 | 2.5 | 100 |
| 3-30 | 4,000 (900/$f^2$) | 0.025 (900/$f^2$) | 900/$f^2$ |
| 30-300 | 4,000 | 0.025 | 1.0 |
| 300-1500 | 4,000 (f/300) | 0.025 (f/300) | (f/300 |
| 1500-100,000 | 20,000 | 0.125 | 5.0 |

Note: f is the frequency, in Megahertz (MHz)




In the event a stricter standard is adopted by the federal or state government, the standard for Stamford shall follow that federal or state standard which is strictest.

8. The ad hoc expert panel will then consider the comments and data submitted by the public at the public hearing, including existing radiation levels in the neighborhood, in addition to the application, scientific and technical data submitted by the applicant in reaching its advisory recommendation regarding the application for the microwave transmission terminal or facility.

9. Within 60 days, the ad hoc expert panel shall recommend to the Health Director who will then submit the advisory recommendation to the Building Inspector or appropriate land use Boards, that the proposal of the applicant be either accepted as is, modified, accepted with conditions or rejected.

10. The Building Inspector and/or the appropriate land use Boards will then be bound to consider the advisory recommendation of the ad hoc expert scientific and technical panel as part of the total consideration given the land use application or exception for a microwave transmission terminal or facility.

11. The Building Inspector and/or the appropriate land use boards shall render a decision in accordance with the Zoning statutes and regulations regarding the total application of the applicant regarding the proposed microwave transmission terminal or facility.

12. If the applicant has not applied to the Health Department prior to applying to the Building Inspector or appropriate land use Board for a permit; the applicant will be deemed to have granted the Building Inspector or appropriate land use Board, an extension of time to reach a decision.

13. Any owner or lessee of a microwave transmission terminal or facility which has not been used for one (1) year, shall, prior to resumption of use, apply for an advisory permit from the Stamford Health Department as set forth herein.

14. Each September after the effective date of this Ordinance, every existing microwave transmission facility or installation within the City of Stamford, shall apply for an annual permit to continue using said facility from the City of Stamford Health Department.

EXHIBIT D

RESOLUTION NO. 93-R-34
(AS AMENDED OCTOBER 26, 1993)

A RESOLUTION CONCERNING THE WILMETTE VILLAGE CODE, 1967, AS AMENDED, CHAPTER 20, ZONING ORDINANCE, ARTICLE 4, DEVELOPMENT REVIEW PROCEDURES

WHEREAS the President and the Board of Trustees believe it is in the public interest to provide guidance as to the interpretation of certain criteria affecting the approval of special use permits for the installation of telecommunications receiver/transmitter equipment;

NOW BE IT RESOLVED BY the President and Board of Trustees of the Village of Wilmette, Illinois:

SECTION 1: That in interpreting the Wilmette Village Code, 1967, as amended, Chapter 20, Zoning Ordinance, Article 4, Development Review Procedures, Section 20-4.3.6, "Standards of Review," where the application for special use seeks approval for a public utility service use, as defined in Section 20-2.1.3 of Article 2 of this Zoning Ordinance, and said proposed public utility service use is the installation of transmission or retransmission antennae or other apparatus for cellular telephone communication, in determining whether said proposed special use satisfies subsection (a)(2) of said Section 20-4.3.6, the applicant should demonstrate:

(A) That the power density of radio frequency (RF) signal or transmission radiation caused by the proposed installation and operation:

15. (a) Said application for an annual permit shall be on a form supplied by the Health Department and shall have appended to it photocopies of any F.C.C. submittals along with a twenty-five dollar ($25.00) permit fee.

(b) No entity, unless specifically exempted from this ordinance, shall operate a microwave transmitter unless it has complied with all of the applicable provisions of this ordinance.

16. After reviewing the annual permit application, the Health Department in its discretion, may require the applicant to comply with the process in paragraphs 3-9 herein if the applicant has never been through the initial application process, or the Health Department has reason to believe that there has been a change in the microwave transmission facility or installation which may cause increased radiation.

17. (a) The Health Department shall conduct radiation testing on an unannounced quarterly basis and such testing shall commence upon the adoption of this ordinance.

(b) The Health Department may select a neutral party to perform the test monitoring of radiation in the City of Stamford or may perform the test monitoring itself. The test results shall be made available to the public for inspection and copying at a reasonable rate or no cost. The radiation data will include the extent of radiation at distances of 50, 100, 200, 500, and 1000 feet from the antenna.

18. (a) Any entity that operates or continues to operate a microwave transmitting facility without complying with all the provisions of this ordinance, shall be guilty of an infraction and shall be fined $100.00 per day for each day that the violation exists. The penalties prescribed herein are in addition to any other civil or criminal penalties that may be applicable.

(b) If the condition causing the violation is not corrected within thirty (30) days, the Health Director shall revoke the permit and seek an injunction to terminate the operation of the offending facility.

19. The applicant shall have all the rights of appeal as set forth in the State of Connecticut zoning statutes and regulations.

20. It is the intention of the Board of Representatives that this ordinance, and every provision thereof, shall be considered separable; and the invalidity of any section, clause, provision or part or portion of any section, clause or provision of the ordinance shall not affect the validity of any other portion of this ordinance.

The Mayor of the City of Stamford is hereby authorized and empowered to act for the City of Stamford and to execute and deliver all documents and directives necessary to implement this ordinance. This ordinance shall take effect upon its passage by the Board of Representatives.

EFFECTIVE DATE: April 7, 1984.
ak
(Approved at 3/12/84 Meeting)

(1) will not exceed 0.25 microwatts/sq.cm. at ground level on properties 1000 feet or more from the proposed site; and,

(2) will not exceed 1.00 microwatts/sq.cm. at ground level on properties within a 300 foot radius of the proposed site.

(3) In determining compliance with subparagraphs (A)(1) and (A)(2), measurements should be taken at 10 foot intervals at ground levels along the circumference of circles with a radius of 300 and a radius of 1000 feet from the proposed site, and the mean of these measurements across a property shall be the value used to determine compliance with subsections (A)(1) and (A)(2).

(B) That the proposed special use is not located on property zoned R, R-1, R-2, R-3 or R-4, and that the transmitter site is not within 500 feet of properties occupied at the time of the application for the special use permit as schools, preschools, or day care centers.

SECTION 2: In conducting the measurements described in Section 1(A)(3):

(A) The applicant shall agree to bear the costs of testing for compliance;

(B) The applicant shall use testing personnel acceptable to the Village and permit the Village to have observers present to inspect the equipment used and monitor the testing to insure its impartiality and reliability;

(C) The applicant shall use testing equipment of sensitivity sufficient to discern existing UHF background RF radiation in the vicinity of the proposed site and the areas referred to in Section 1. The equipment used must have an up to date calibration certificate from a federally approved test laboratory and be operated by a qualified individual.

SECTION 3: As a condition of the special use permit, the applicant shall agree:

(A) That the applicant will immediately notify the Village of any change in transmission equipment or radiated energy, at which time the permit holder agrees to retesting to determine continued compliance with Section 1, at the permit holder's expense;

(B) That retesting of the site to determine continuing compliance shall be conducted by the applicant bi-annually on the anniversary of the commencement of the special use and the results of said retest provided to the Village.

(C) That continued use and enjoyment of the special use permit is conditional upon:

(1) Continued compliance with the standards set forth in Section 1; and,

(2) Continued compliance with the terms of Section 3.

ADOPTED by the President and Board of Trustees of the Village of Wilmette, Illinois, on the 28th day of September, 1993.

AYE: 4

NAY: 3

s/s John Jacoby
President of the Village of
Wilmette, IL

ATTEST:

s/s Heidi Voorhees
Clerk of the Village of
Wilmette, IL

## C. General requirements

1. Grouping of towers. The grouping of towers on a site is encouraged where technically feasible, provided it will not result in radio frequency emission levels exceeding the standards of this chapter.

2. Tower finish. For towers not regulated by the Oregon Aeronautics Division or Federal Aviation Administration, a finish (paint/surface) must be provided that reduces the visibility of the structure.

3. Tower illumination. Towers must not be illuminated except as required for the Oregon State Aeronautics Division or the Federal Aviation Administration.

4. Radio frequency emission levels. All existing and proposed radio or television broadcast facilities are prohibited from exceeding or causing other facilities to exceed the radio frequency emission standards specified in Table 274-1.

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**Table 274-1**
**Radio Frequency Emission Standards [1]**

| Frequency Range | Mean Squared Electric ($E^2$) Field Strength ($V^2/m^2$) [2] | Mean Squared Magnetic ($H^2$) Field Strength ($A^2/m^2$) [3] | Equivalent Plane-Wave Power Density ($mW/cm^2$) [4] |
|---|---|---|---|
| 100 KHz – 3 MHz | 80,000 | 0.5 | 20 |
| 3 MHz – 30 MHz | 4,000 ($180/f^2$) [5] | 0.025 ($180/f^2$) | $180/f^2$ |
| 30 MHz – 300 MHz | 800 | 0.005 | 0.2 |
| 300 MHz – 1500 MHz | 4,000 (f/1500) | 0.025 (f/1500) | f/1500 |
| 1500 MHz – 300 GHz | 4,000 | 0.025 | 1.0 |

Notes:

[1] All standards refer to root mean square (rms) measurements gathered by an approved method.
[2] $V^2/m^2$ = Volts squared per meter squared.
[3] $A^2/m^2$ = Amperes squared per meter squared.
[4] $mW/cm^2$ = Milliwatts per centimeter squared.
[5] f = Frequency in megahertz (MHz).

5. Antenna requirements. The antenna on any tower or support structure must meet the minimum siting distances to habitable structures shown in Table 274-2. Measurements are made from points A and B on the antenna to the nearest habitable structure normally occupied on a regular basis by someone other than the immediate family or employees of the owner/operator of the antenna. Point A is measured from the highest point of the antenna (not the tower) to the structure, and Point B is measured from the closest point of the antenna to the structure.

**Table 274-2**
**Distance Between Antenna and Habitable Structure**

| Effective Radiated Power | Frequency (MHz) | Point A: Minimum Distance From Highest Point of Antenna To Habitable Structure (feet) | Point B: Minimum Distance From Closest Portion Of Antenna To Habitable Structure (feet) |
|---|---|---|---|
| < 100 watts | | 10 | 3 |
| 100 watts to 999 watts | | 15 | 6 |
| 1,000 watts to 9.999 Kw | < 7 | 11 | 5 |
| | 7 - 30 | f/0.67 | f/1.5 |
| | 30 - 300 | 45 | 20 |
| | 300 - 1500 | 780/√f | 364/√f |
| | > 1500 | 20 | 10 |
| 10 Kw plus | < 7 | 17.5 | 8 |
| | 7 - 30 | f/0.4 | f/0.91 |
| | 30 - 300 | 75 | 33 |
| | 300 - 1500 | 1300/√f | 572/√f |
| | 1500 | 34 | 15 |

Where f is frequency in megahertz.

**D. Additional requirements in residential zones.** In addition to the regulations in Subsection C. above, applications in residential zones must meet all of the following standards:

1. Minimum lot size. The minimum lot area in all R zones is 40,000 square feet.

2. Tower setback. At a minimum, all towers must be set back a distance equal to 20 percent of the height of the tower from all abutting R-zoned property, public property, or public streets.

3. Guy anchor setback. Tower guy anchors must meet the main building setback requirements of the base zone.

4. Landscaped area. An area landscaped to at least the L3 standard must be provided. For towers up to 200 feet in height, the area must be 25 feet deep, and for towers over 200 feet in height, the area must be 40 feet deep. The L3 landscaping is to be provided on the side of the area closest to the tower. A row of coniferous trees is required in both the 25 and 40 foot areas. In addition, a row of deciduous trees is required in the 40 foot area. Sites may be exempted from the landscaped area requirements provided the Director finds that the vegetation or the topography of the site provides a natural buffer.

5. Tower design.

   a. For a tower accommodating a radio and television broadcast facility of 100,000 watts or more, the tower must be designed to support at least two additional transmitter/antenna systems of equal or greater power to that proposed by the applicant and one microwave facility, and at least three two-way antennas for every 40 feet of tower over 200 feet of height above ground.

   b. For any other tower, the design must accommodate at least three two-way antennas for every 40 feet of tower, or at least one two-way antenna for every 20 feet of tower and one microwave facility.

   c. The requirements of Subparagraphs a. and b. above may be modified by the City to provide the maximum number of compatible users within the radio frequency emission levels.

6. Locating antenna on existing towers. An effort in good faith must be made to locate a new antenna on existing towers. Requests for a new tower must be accompanied by evidence that application was made to locate on existing towers, with no success.

## 33.274.050 Review Procedures and Approval Criteria

All radio and television broadcast facilities subject to this chapter are reviewed through the procedures stated below. All approval criteria for these reviews are stated in Section 225 of Chapter 33.815, Conditional Uses.

A. **Type II procedure.** Antennas broadcasting at less than 100 uW/cm$^2$ from existing non-broadcast towers are reviewed through a Type II procedure.

B. **Type III procedure.** All other radio and television broadcast facilities are reviewed through a Type III procedure.

## 33.274.060 Registration of Existing Facilities

All radio and television broadcast facilities subject to this chapter and existing as of September 19, 1987 must complete and submit the radio and television facility registration form available from the City.

## 33.274.070 Measurements

A. **Measurements by engineer.** All measurements required in this chapter must be made by a qualified licensed engineer with a Federal Communications Commission First Class or General Radio-Telephone License or under the supervision of a registered professional electrical engineer.

B. **Method of measurement.** Measurements are to be made in accord with the latest version of American National Standards Institute's (ANSI) Standard C95.3 Techniques and Instrumentation for the Measurement of Potentially Hazardous Electromagnetic Radiation at Microwave Frequencies, or by similar methods considered appropriate by the engineer.

C. **Instrument calibration.** For all measurements made to ensure compliance with this chapter, evidence must be submitted showing that the instrument or instruments used were calibrated within the manufacturer's suggested periodic calibration interval, and that the calibration is by methods traceable to the National Bureau of Standards. A letter must also be submitted stating that the measurements were made in accordance with good engineering practices and verifying the accuracy of the results of the measurements.

## 33.274.080 Review of Radio and Television Broadcast Facility Regulations

A. **Review of City regulations.** The standards in this chapter and the radio and television facility conditional use requirements will be reviewed by the City of Portland in 1992 to determine their adequacy relative to public health.

B. **New federal or state standards.** In the event that either the federal or state government adopts mandatory or advisory standards more stringent than those described in this chapter, the Planning staff will prepare a report and recommendation on any necessary revisions to the City's adopted standards. The Council will endeavor to bring the City standards into compliance with those standards within 30 days of the date the new standards become effective.